What is claimed is:

1. A metal powder production process by using a metal compound as a raw material and reducing said metal compound, comprising:

a molding step in which the metal compound is mixed with a binder, is molded, and is sintered to produce a metal compound feed compact; and

a reducing step in which a metal is formed by reducing the metal compound feed compact by contacting the metal compound feed compact with an active metal as a reducing agent.

2. A metal powder production process according to claim 1 wherein a niobium compound is used as the metal compound.

3. A metal powder production process according to claim 1 wherein a tantalum compound is used as the metal compound.

4. A metal powder production process according to claim 1 wherein a compound of a metal element selected from zirconium, titanium, hafnium, rare earth metal and actinide metal is used as the metal compound.

5. A metal powder production process according to claim 1 wherein in the molding step, the metal compound feed compact is molded by mixing a metal compound, a binder, and an active metal compound as a reaction agent.

6. A metal powder production process according to claim 1 wherein at least one active metal selected from calcium, magnesium, sodium, barium and potassium is used

as the reducing agent.

7. A metal powder production process according to claim 2 wherein at least one compound of an active metal selected from calcium, magnesium, sodium, barium and potassium is used as the reaction agent.

8. A metal powder production process according to claim 2 wherein one selected from a niobium oxide and niobium halide is used as the niobium compound.

9. A metal powder production process according to claim 1 wherein the temperature of the metal compound feed compact in the reducing step is 600 to 1300°C.

10. A metal powder production process according to claim 1 wherein in the molding step, the metal compound feed compact is molded into a shape in which the distance from an arbitrary location within the metal compound feed compact to the surface of the compact is not longer than 10 mm.

11. A metal powder production process according to claim 1 wherein a step is additionally contained in which the metal formed in the reducing step is separated from the active metal and by-products by acid treatment.

12. A metal compound feed compact comprised by mixing a metal compound and a binder, molding, and firing; wherein

the distance from an arbitrary location within the compact to the surface of the compact is not longer than 10 mm.

13. A metal compound feed compact according to claim 12 wherein the metal compound contains a compound raw material of a metal element selected from niobium, zirconium, titanium, hafnium, tantalum, rare earth metal and actinide metal.

14. A metal compound feed compact according to claim 12 wherein the metal compound feed compact contains at least one compound of a metal selected from calcium, magnesium, sodium, barium and potassium as the reaction agent.

15. A metal compound feed compact according to claim 14 wherein the reaction agent is one selected from an oxide, halide, and carbonate of at least one metal selected from calcium, magnesium, sodium, barium and potassium.